07/19/2017 19:00 UTC

The following graphs represent the coordinated launch for Langley Research Center (LaRC; 37.1024, -76.3929) and the Chesapeake Bay Bridge Tunnel 3rd Island (CBBT; 37.0366, -76.0767) on 07/19/2017 at approximately 19:00 UTC. This launch coincided with the SHERPA flight. Wind in the first 50 m of launch for both sites came approximately from the southeast. Preliminary analysis suggests possible boundary layer capped around 1600 m at LaRC and CBBT. Potential temperature profiles show largest divergence between sites in the first 1000 m, with CBBT having lower potential temperature (maximum difference of about 3 K). Potential temperature profile was in very close agreement between CBBT and LaRC from 1000 m to 5000 m with difference of less than 0.5 K.

Preliminary observations suggest some potentially interesting differences in ozone mixing ratio profiles above CBBT and LaRC with some similarities. LaRC appears to have a higher surface ozone mixing ratio compared to CBBT (almost 20 ppbv). CBBT ozone mixing ratio increased to values similar to Larc around 300 m. Ozone mixing ratio above both CBBT and LaRC appears to have generally fluctuated around 60 ppbv to 70 ppbv from 300 m to 3800 m. From 3800 m to 5000 m ozone mixing ratio at LaRC appears to have increased and diverged from CBBT values with maximum difference at 4500 m (10 ppbv difference).

PLEASE NOTE: This data is preliminary and should not be used for official business until certified by NASA technical staff.

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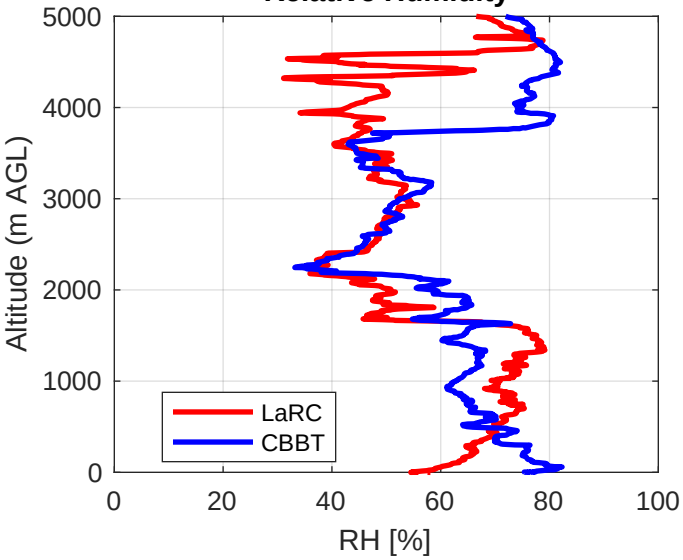
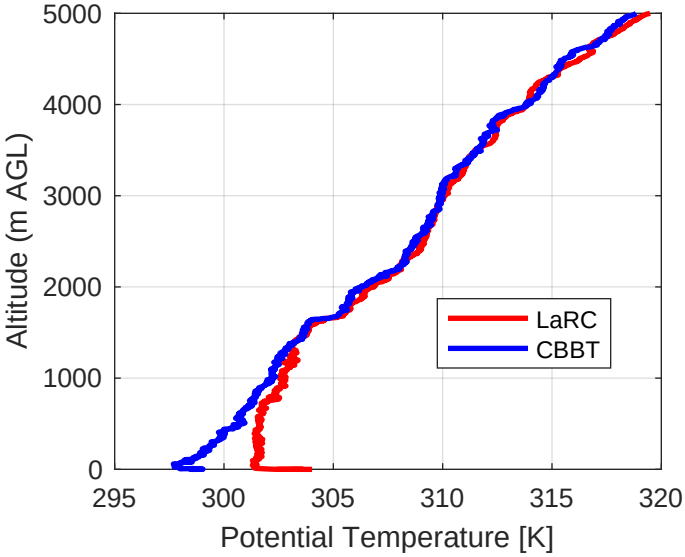
CBBT Sonde POC: Travis Knepp (travis.n.knepp@nasa.gov)

Sonde Data: 07/19/2017 19:25 UTC (LaRC) and 18:59 UTC (CBBT)

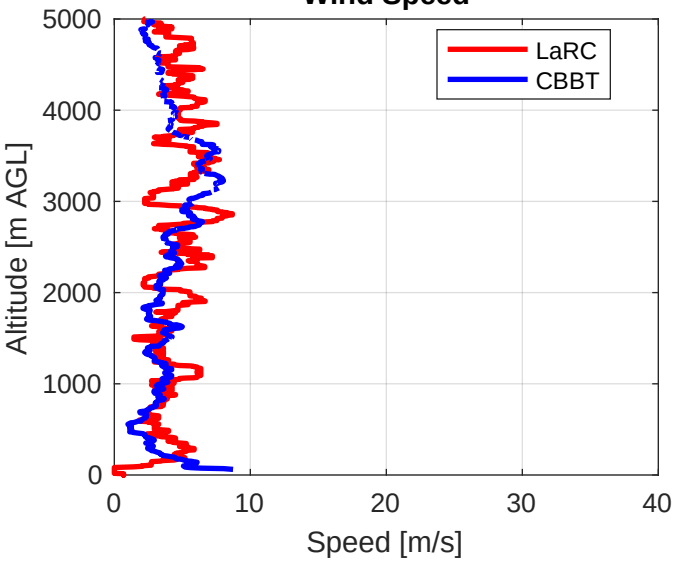
Relative Humidity



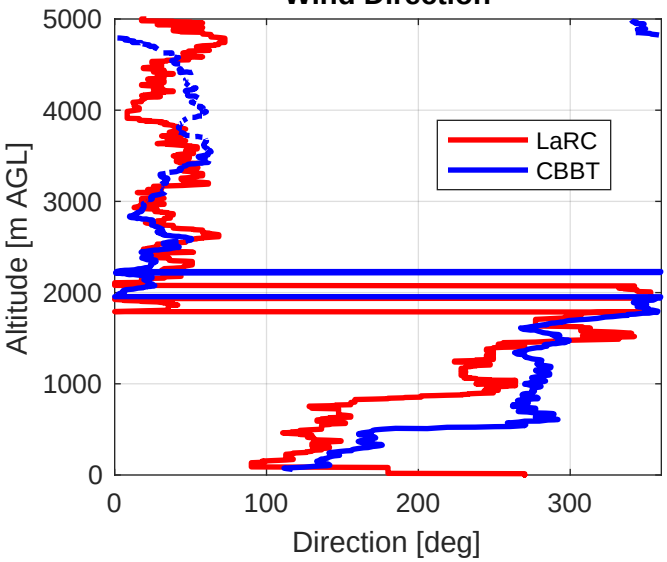
Theta



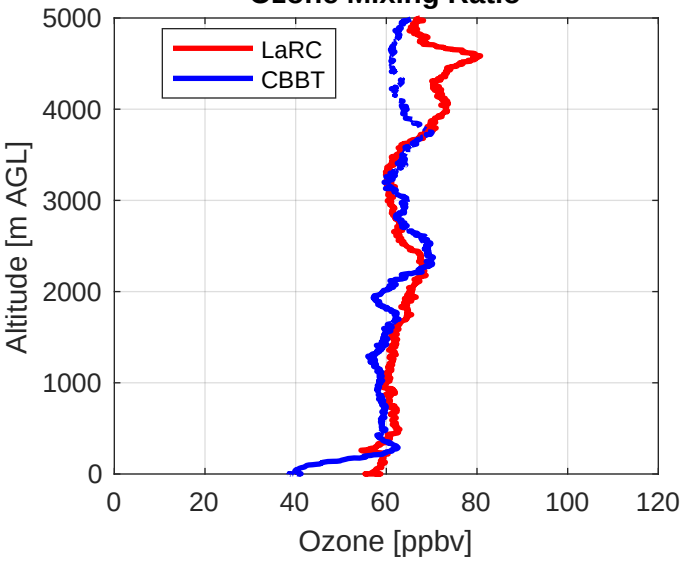
Wind Speed



Wind Direction



Ozone Mixing Ratio



Ozonesonde Map [ppbv]